

## REPORT ON OIL ENGINE MACHINERY.

No 99121

JAN 20 1941

Received at London Office

Date of writing Report 11-1-1941 When handed in at Local Office 16/1/1941 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Willington Quay - n - Tyne Date, First Survey 23.5.40 Last Survey 9.1.1941  
Reg. Book. Number of Visits 13

on the Single Screw M.V. "NORTH GATE." Tons { Gross 428.63  
Triple Net 223.61  
Quadruple

Built at Willington Quay - n - Tyne By whom built Clelands Successors Ltd. Yard No. 54 When built 1941  
Engines made at Manchester By whom made Crossley Bros. Ltd. Engine No. 2006 When made 1940  
Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓  
Brake Horse Power 350 Owners Hull Gates Shipping Co. Ltd. Port belonging to Hull  
Nom. Horse Power as per Rule 116 Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted ✓  
Trade for which vessel is intended Coasting. as per Manchester Report No 9911 dated 4.3.40.

OIL ENGINES, &c.—Type of Engines Vertical Solid Injection 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 690 lbs. per sq. in. Diameter of cylinders 10 1/2" Length of stroke 13 1/2" No. of cylinders 6 No. of cranks 6  
Mean Indicated Pressure 70 lbs. per sq. in. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 14 1/16" Is there a bearing between each crank ✓  
Revolutions per minute 325 Flywheel dia. 37 1/2" Weight 2166 lbs. Means of ignition Compression Kind of fuel used Heavy Oil.

Crank Shaft, { Solid forged dia. of journals as per Rule Approved as fitted 7 1/2" Crank pin dia. 7 1/4" Crank Webs Mid. length breadth 9 1/4" Thickness parallel to axis Solid  
{ Shrink Mid. length thickness 3 1/2" Thickness around eye hole ✓

Flywheel Shaft, diameter as per Rule ✓ as fitted ✓ Intermediate Shafts, diameter as per Rule Approved as fitted 4 3/4" Thrust Shaft, diameter at collars as per Rule Approved as fitted 4 3/4"

Tube Shaft, diameter as per Rule ✓ as fitted ✓ Screw Shaft, diameter as per Rule Approved as fitted 5 3/8" Is the { tube } shaft fitted with a continuous liner { No }  
{ screw }

Bronze Liners, thickness in way of bushes as per Rule ✓ as fitted ✓ Thickness between bushes as per Rule ✓ as fitted ✓ Is the after end of the liner made watertight in the propeller boss ✓  
If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ✓  
If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓  
If two liners are fitted, is the shaft lapped or protected between the liners ✓ Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft Yes If so, state type As approved Length of Bearing in Stern Bush next to and supporting propeller 21"

Propeller, dia. 65" Pitch 48" No. of blades 4 Material Man. Bronze whether Moveable No Total Developed Surface ✓ sq. feet

Method of reversing Engines DIRECT Is a governor or other arrangement fitted to prevent racing of the engine when declutched ✓ Means of lubrication Forced Thickness of cylinder liners 1" Are the cylinders fitted with safety valves ✓ Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Water cooled If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine ✓

Cooling Water Pumps, No. Three Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓

Bilge Pumps worked from the Main Engines, No. One Diameter 4 1/4" Stroke 3" Can one be overhauled while the other is at work ✓

Pumps connected to the Main Bilge Line { No. and Size One - 70 tons per hour ✓ One - 25 tons per hr.  
How driven Diesel Engine. ✓ Chain drive from Diesel Engine.

Is the cooling water led to the bilges No If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements ✓ Suction by Newbery Diesel Eng. Lon. Rpt. 109424 attached

Ballast Pumps, No. and size 1 - 40 tons per hour Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 - 1 3/8" x 2" stroke  
1 - 1 1/4" x 2"

Are two independent means arranged for circulating water through the Oil Cooler ✓ Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces Aft - 2 of 2 1/2" Ford - 1 of 2 1/2" In Pump Room ✓  
In Holds, &c. 1 each P. & S. 2 1/2"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 - 2 1/2"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes ✓ Are the Bilge Suctions in the Machinery Spaces led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges ✓ Yes, level.

Are all Sea Connections fitted direct on the skin of the ship ✓ Are they fitted with Valves or Cocks Valves

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates ✓ Are the Overboard Discharges above or below the deep water line Above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel ✓ Are the Blow Off Cocks fitted with a spigot and brass covering plate ✓

What pipes pass through the bunkers ✓ How are they protected ✓

What pipes pass through the deep tanks ✓ Have they been tested as per Rule ✓

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times ✓

Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another ✓ Is the Shaft Tunnel watertight Machy aft Is it fitted with a watertight door ✓ worked from ✓

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ✓

Main Air Compressors, No. One No. of stages Two Diameters 5 1/2", 2 1/2" Stroke 4" Driven by Main Engine.

Auxiliary Air Compressors, No. One No. of stages Two Diameters 11 1/2" f. per min. Stroke Press. 400 lbs Driven by Diesel Engine

Small Auxiliary Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

What provision is made for first Charging the Air Receivers Auxiliary air compressor. hand starting

Scavenging Air Pumps, No. 1 - J. A. Tandem Diameter 20 1/2" Stroke 9 1/4" Driven by Main Engine.

Auxiliary Engines crank shafts, diameter as per Rule ✓ as fitted ✓ No. 2 Position 1 - each P. & S.

Have the Auxiliary Engines been constructed under special survey ✓ Is a report sent herewith ✓



AIR RECEIVERS:—Have they been made under survey ☒ State No. of Report or Certificate ☒  
Is each receiver, which can be isolated, fitted with a safety valve as per Rule ☒  
Can the internal surfaces of the receivers be examined and cleaned ☒ Is a drain fitted at the lowest part of each receiver ☒  
Injection Air Receivers, No. ☒ Cubic capacity of each ☒ Internal diameter ☒ thickness ☒  
Seamless, lap welded or riveted longitudinal joint ☒ Material ☒ Range of tensile strength ☒ Working pressure ☒  
Starting Air Receivers, No. ☒ Total cubic capacity 300 c.f. Internal diameter 24 1/8" thickness 15/32"  
Seamless, lap welded or riveted longitudinal joint ☒ Material Steel Range of tensile strength ☒ Working pressure ☒

IS A DONKEY BOILER FITTED? ☒ If so, is a report now forwarded? ☒  
Is the donkey boiler intended to be used for domestic purposes only ☒  
PLANS. Are approved plans forwarded herewith for Shafting ☒ Receivers ☒ Separate Fuel Tanks ☒  
Donkey Boilers ☒ General Pumping Arrangements ☒ Pumping Arrangements in Machinery Space ☒  
Oil Fuel Burning Arrangements ☒  
SPARE GEAR.  
Has the spare gear required by the Rules been supplied ☒  
State the principal additional spare gear supplied ☒

FOR AND ON BEHALF OF  
The foregoing is a correct description of the MANAGER ASST. Manufacturer.

Dates of Survey while building  
During progress of work in shops-- 23/5/40, 31/7/40  
During erection on board vessel-- 21/8/40, 27/8/40, 3/9/40, 4/10/40, 7/11/40, 11/11/40, 29/11/40, 23/12/40, 31/12/40, 3/1/41, 9/1/41  
Total No. of visits 13  
Dates of Examination of principal parts—Cylinders ☒ Covers ☒ Pistons ☒ Rods ☒ Connecting rods ☒  
Crank shaft ☒ Flywheel shaft ☒ Thrust shaft ☒ Intermediate shafts 23-5-40 Tube shaft ☒  
Screw shaft 31.7.40 Propeller 31.7.40 Stern tube 27-5-40 Engine seatings ☒ Engines holding down bolts 11-12-40  
Completion of fitting sea connections 22-12-40 Completion of pumping arrangements 31-12-40 Engines tried under working conditions 31-1-41  
Crank shaft, Material O.H. Steel Identification Mark Lloyd's 906 4.6.4 Flywheel shaft, Material ☒ Identification Mark ☒  
Thrust shaft, Material O.H. Steel Identification Mark Lloyd's 1003 4.6.4 Intermediate shafts, Material S.H. Steel Identification Marks 4740.48.28-5-40  
Tube shaft, Material ☒ Identification Mark ☒ Screw shaft, Material S.H. Steel Identification Mark 4739 48.31.7.40  
Identification Marks on Air Receivers Lloyd's Test 400.665. W.P. 350.165. 4.3.40.

Is the flash point of the oil to be used over 150° F. ☒  
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with ☒  
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo ☒ If so, have the requirements of the Rules been complied with ☒  
If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with ☒  
Is this machinery duplicate of a previous case ☒ If so, state name of vessel ☒  
General Remarks (State quality of workmanship, opinions as to class, &c. This machinery has now been satisfactorily installed above the vessel examined under full working conditions with satisfactory results & is eligible in my opinion to be classed with notation + L.M.C. 1.41, oil engines O.G. Truck? aft.

The amount of Entry Fee .. £ : : When applied for, 196 JAN 1941  
Special ... £ 9 : 14 :  
Donkey Boiler Fee ... £ : : When received, 19  
Travelling Expenses (if any) £ : : 19

Committee's Minute

Assigned

Engineer Surveyor to Lloyd's Register of Shipping.



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